

IN THE CLAIMS:

The claims, as currently pending in the application, read as follows:

1. (Previously Presented) A method of marking an input tree, the input tree describing a document and comprising a plurality of parent nodes and child nodes, wherein each parent node defines operations to be performed on child nodes of that parent node, said method comprising the steps of:

(a) determining which of the plurality of nodes fit into a target area within the document;

wherein said determining step comprises the sub-steps of:

(a1) setting one of the plurality of nodes as a current node for the target area;

(a2) comparing the size of the current node with available space in the target area;

(a3) if the size of the current node is not greater than the available space, deciding that the current node fits into the target area;

(a4) if the size of the current node is greater than the available space, performing the further sub-steps of:

(a4i) determining whether the current node is a parent node;

(a4ii) setting one of the child nodes as the new current node if the current node is a parent node; and

(a4iii) recursively executing steps (a2) to (a4) with respect to the new current node; and

(b) marking the nodes that fit into the target area with a common mark specific to the target area such that a section of the input tree that fits into the target area is defined while preserving the structure of the input tree.

2. (Previously Presented) The method according to claim 1, wherein said determining step further comprises the initial steps of:

checking whether the current node has already been marked; and  
performing steps (a1) to (a4) if the current node has not been marked.

3. (Previously Presented) The method according to claim 1, further comprising the step of updating the available space by decreasing the size of the available space by the size of the current node if it is determined that the current node fits into the target area.

4. (Cancelled)

5. (Previously Presented) The method according to claim 1, wherein in step (a4ii), a first node and a second node are set as the new current node, sequentially, when the current node, has two child nodes.

6. (Previously Presented) The method according to claim 1, wherein in step (b), the current node is marked with a special mark if the size of the current node is greater than the available space and the current node has no children nodes.

7. (Previously Presented) A method of forming a tree fragment from an input tree by splitting the input tree, the input tree having nodes marked with a common mark associated with the tree fragment such that a section of the input tree is defined while preserving the structure of the input tree, wherein the input tree describes a document and comprises a plurality of parent nodes and child nodes, wherein each of the parent nodes defines operations to be performed on child nodes of that parent node, said method comprising the steps of:

identifying the nodes marked with the common mark; and

generating the tree fragment from the nodes marked with the common mark.

8. (Cancelled)

9. (Previously Presented) The method according to claim 7, wherein said identifying step comprises the sub-steps of:

setting one of the nodes as a start node;

checking whether the start node is marked with the common mark

associated with the tree fragment; and

completing the identifying step if the start node is marked with the common mark associated with the tree fragment.

10. (Previously Presented) The method according to claim 9, further comprising the steps of:

checking whether the start node has already been marked if the start node is not marked with the common mark associated with the tree fragment;

determining whether the start node has at least one child node if the start node has not been marked;

setting one of the child nodes as the start node if the start node has at least one child node; and

recursively executing said identifying step.

11. (Previously Presented) The method according to claim 10, wherein in said step of setting one of the child nodes, a first node and a second node are set sequentially, when the start node has two children nodes.

12. (Previously Presented) The method according to claim 7, wherein said creating step comprises the step of performing a predetermined function on the nodes marked with the common mark associated with the tree fragment.

13. (Previously Presented) An apparatus for marking an input tree, the input tree describing a document and comprising a plurality of parent nodes and child nodes, wherein each parent node defines operations to be performed on child nodes of that parent node, said apparatus comprising:

determining means for determining which of the plurality of nodes fit into a target area within the document by performing the steps of:

(a1) setting one of the plurality of nodes as a current node for the target area;

(a2) comparing the size of the current node with available space in the target area;

(a3) if the size of the current node is not greater than the available space, deciding that the current node fits into the target area;

(a4) if the size of the current node is greater than the available space, performing the further sub-steps of:

(a4i) determining whether the current node is a parent node;

(a4ii) setting one of the child nodes as the new current node if the current node is a parent node; and

(a4iii) recursively executing the steps (a2) to (a4) with respect to the new current node; and

marking means for marking the nodes that fit into the target area with a common mark specific to the target area such that a section of the input tree that fits into the target area is defined while preserving the structure of the input tree.

14. (Previously Presented) The apparatus according to claim 13, wherein said determining means comprising further comprises:

checking means for checking whether the current node has already been marked; and

initiating means for initiating said determining means if the current node has not been marked.

15. (Previously Presented) The apparatus according to claim 13, further comprising updating means for updating the available space by decreasing the size of the available space by the size of the current node if it is determined that the current node fits into the galley target area.

16. (Cancelled).

17. (Previously Presented) The apparatus according to claim 13, wherein in step (a4ii) a first node and a second node are set as the new current node sequentially, when the current node has two children nodes.

18. (Previously Presented) The apparatus according to claim 13, wherein said marking means marks the current node with a special mark if the size of the current node is greater than the available space and the current node has no child nodes.

19. (Previously Presented) An apparatus for forming a tree fragment from an input tree by splitting the input tree, the input tree having nodes marked with a common mark associated with the tree fragment such that a section of the input tree is defined while preserving the structure of the input tree, wherein the input tree describes a document and comprises a plurality of parent nodes and child nodes, wherein each of the parent nodes defines operations to be performed on child nodes of that parent node, said apparatus comprising:

identification means for identifying the nodes marked with the common mark; and

creating means for generating the tree fragment from the nodes marked with the common mark.

20. (Cancelled).

21. (Previously Presented) The apparatus according to claim 19, wherein said identifying means comprises:

setting means for setting one of the nodes as a start node;

checking means for checking whether the start node is marked with the common mark associated with the tree fragment; and

completing means for completing the identification if the start node is marked with the common mark associated with the tree fragment.

22. (Previously Presented) The apparatus according to claim 21, further comprising:

mark checking means for checking whether the start node has already marked if the start node is not marked with the common mark associated with the tree fragment;

child node determining means for determining whether the start node has at least one child node if the start node has not been marked;

second setting means for setting one of the child nodes as the start node if the start node has at least one child node; and

controlling means for recursively initiating said identification.

23. (Original) The apparatus according to claim 22, wherein said second setting means sets a first node and a second node sequentially, when the start node has two children nodes.

24. (Previously Presented) The apparatus according to claim 19, wherein said creating means comprises function means for performing a predetermined function on the nodes marked with the common mark associated with the tree fragment.

25. (Previously Presented) A computer program product including a computer readable medium incorporating a computer program for marking an input tree, the input tree describing a document and comprising a plurality of parent nodes and child nodes, wherein each parent node defines operations to be performed on child nodes of that parent node, said computer program product comprising:

means for determining which of the plurality of nodes fit into a target area within the document by performing the steps of:

(a1) setting one of the plurality of nodes as a current node for the target area:

(a2) comparing the size of the current node with available space in the target area:



(a3) if the size of the current node is not greater than the available space,  
deciding that the current node fits into the target area:

(a4) if the size of the current node is greater than the available space,  
performing the further sub-steps of:

(a4i) determining whether the current node is a parent node;

(a4ii) setting one of the child nodes as the new current node if the  
current node is a parent node; and

(a4iii) recursively executing steps (a2) to (a4) with respect to the  
new current node; and

means for marking the nodes that fit into the target area with a common  
mark specific to the target area such that a section of the input tree that fits into the target  
area is defined while preserving the structure of the input tree.

26. (Previously Presented) A computer program product including  
readable medium incorporating a computer program for forming a tree fragment from an  
input tree by splitting the input tree, the input tree having nodes marked with a common  
mark associated with the tree fragment such that a section of the input tree is defined while  
preserving the structure of the input tree, wherein the input tree describes a document and  
comprises a plurality of parent nodes and child nodes, wherein each of the parent nodes  
defines operations to be performed on child nodes of that parent node, said computer  
program product comprising:

means for identifying the nodes marked with the common mark; and

means for generating the tree fragment from the nodes marked with the common mark.